

# Preparing WIA Youth for Green Jobs

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A primary purpose of Workforce Investment Act (WIA) youth programs is to enable youth to find entry-level employment and advance in the workforce through education and training. Finding good jobs in many communities is difficult. The developing green economy is projected to deliver large numbers of jobs that will provide good wages, be difficult to outsource, and offer career paths and opportunities for entrepreneurship.

## What Is The Green Economy?

Because it is a relatively new concept, there are a variety of definitions of *green economy*. Some limit it to economic activities relating to the production of sustainable energy, such as wind, solar, biofuels, geothermal, hydropower, fuel cells, even nuclear, with a goal of reducing our dependence on fossil fuels like oil, natural gas, and coal.

More broadly, the green economy is also concerned with reducing carbon dioxide and other greenhouse gases, improving energy efficiency, upgrading public transportation, and protecting and restoring our environment, including water resources and waste management. Much of the green economy involves retooling and rethinking how industry functions in order to increase the efficient use of energy and other resources and to reduce activities that are harmful to people and the environment.

Sectors that have been identified as part of the green economy include

- Construction, including
  - Retrofitting buildings to be more energy efficient
  - New construction that uses nontoxic and energy-efficient materials and techniques
  - Recycling building materials
- Transportation, including
  - Energy efficient automobiles
  - Public transportation
  - Nonmotorized transportation like bicycles or walking and associated changes in space planning to encourage less driving such as bike paths and localization of services
- Sustainable energy such as solar, wind, and cellulosic biofuels
- Green manufacturing, which encompasses
  - Manufacturing energy-efficient products
  - Avoiding toxic processes and byproducts
  - Recycling
  - Efficient use of materials and energy
- Reforestation and other environmental conservation and preservation activities
- Waste and water management

The current global market for environmental products and services was estimated at \$1.37 trillion in 2006 and may double to \$2.74 trillion by 2020. The U.S. market in 2005 was \$341 billion and was projected to increase to \$496 billion by 2020.

## What Are Green Jobs?

*Green jobs*, sometimes called *green-collar jobs*, range from low-skill, entry-level jobs to high-skill, higher-paying positions. Some jobs are relatively new, such as solar panel fabricators and installers or energy auditors. Traditional jobs may also take on a green tinge as architects design green buildings, welders fabricate wind turbines, and construction crews recycle building materials. Some examples of green sectors and representative jobs are shown in the table below.

### Green Economy Sectors and Jobs

Sector	Representative Jobs
Building retrofitting	Architects Energy auditors Electricians Insulation workers Carpenters and carpenter helpers Laborers Building inspectors Installers of windows and efficient heating/lighting systems Manufacturers of materials, systems, and appliances
Wind power	Environmental engineers Iron and steel workers Millwrights Sheet metal workers Machinists Industrial production managers Construction machine operators Maintenance technicians
Cellulosic biofuels	Chemical engineers Chemical technicians Mixing and blending machine operators Agricultural workers Industrial truck drivers Farm product purchasers Agricultural and forestry supervisors Agricultural inspectors Distributors and marketers of fuel
Energy-efficient automobiles	Computer-controlled machine operators Computer software engineers Electrical engineers Engineering technicians Engine assemblers Metal fabricators Operations managers Production helpers Welders Dealers and sales staff Repair technicians

- 3 Given the different definitions of the green economy, estimates of current employment and projected job growth differ considerably, but all show substantial increases in green employment over the next few decades.

## Two Estimates of Current and Projected Green Economy Jobs in the United States

Current	Projected
751,051 (2006)	2,540,800 in 2018 3,481,000 in 2028 4,214,700 in 2038
5,300,000 (2006)	5,800,000 in 2010 6,300,000 in 2015 6,900,000 in 2020

By one estimate, 85 percent of current green jobs are located in metropolitan areas and significant numbers of new jobs can be expected to locate near urban areas. Rural areas can also benefit, especially from biofuel and wind energy production.

## Current and Projected Green Jobs in Selected Ohio Metropolitan Areas

Metropolitan Areas	Current (2006)	Projected (2038)
Akron	947	7,496
Cincinnati-Middletown, OH-KY-IN	4,221	33,398
Cleveland-Elyria-Mentor	2,952	23,357
Columbus	3,938	31,163
Dayton	1,180	9,334
Mansfield	146	1,156
Springfield	84	662
Toledo	1,298	10,272
Youngstown-Warren-Boardman, OH-PA	456	3,604

Many promoters of the green economy want to make sure that green jobs have safe working conditions, opportunities for skill enhancement, and family-sustaining wages and benefits. They have supported legislation to encourage funding for equitably distributed jobs that offer youth and adults a route out of poverty.

### Green Jobs Legislation

The Energy Independence and Security Act (P.L. 110-140), which includes the Green Jobs Act (Title X), was signed into law on December 19, 2007. The Green Jobs Act and other sections of this law provide incentives to grow the green economy and train the green workforce with a focus on providing a path out of poverty. The funding for this law has not yet been appropriated.

The Green Jobs Act authorizes \$125 million per year for a pilot program to identify needed skills, develop training programs, and train workers for jobs in a range of green industries. If funded, most of the money would be granted competitively by the U.S. Department of Labor to state and community job training partnerships. In addition to federal programs, many states, including Ohio, have established programs to attract and nurture green businesses.

### Green Jobs and the WIA Youth Program

Ohio, like other midwestern states, is a good area for green business development because of the existing transportation infrastructure, manufacturing expertise, and high-technology environment. High-quality jobs in a green economy will also require a high-quality workforce. WIA youth programs should participate in community or regional efforts to develop green businesses and prepare to offer the necessary skills training to youth. For example, WIA youth programs can take these steps.

- Identify your local area's environmental resources, for instance
  - Do you live in a wind corridor?
  - Do you grow or produce materials that can be used for biofuels or that can be recycled into other products?
  - Do you have existing green businesses with potential for growth?
- Identify your local area's workforce resources, such as manufacturing skills that can transfer to producing green products.
- Participate in your local area's economic development planning to attract and promote green businesses.
- Work with existing green businesses.
  - Be aware of their present and future skill requirements and training needs.
  - Arrange for interested youth to job shadow, intern, or have other paid and unpaid work experiences.
  - Have employers visit job fairs and speak to youth about their industry.
  - Recruit mentors from green industries.
- Determine what K-12 education, community colleges, and other postsecondary institutions are doing to prepare youth for the green economy:
  - Are there specific degrees or certificates given for green jobs, such as solar panel installation?
  - Is required or optional coursework in green techniques offered for majors such as construction management, architecture, or manufacturing?
- Participate in developing green job training partnerships by working with employers, community organizations, government agencies, and labor unions.
  - Assess skills in green techniques as part of objective assessment.
  - Develop individual service strategies (ISSs) that include green job readiness skills, Green Jobs Corps, and green apprenticeships as options.
  - Consider incorporating green job exploration into environmental service projects.
  - Identify and secure foundation, local, state, and federal grants and other funding resources.

## Help Youth Thrive with Green Jobs

The combination of recent high energy prices and concerns about climate change has led to great interest in moving toward a more sustainable, greener economy. Although energy prices have eased, they are expected to increase when the economy picks up again. The green economy is likely to continue to gain steam, and WIA youth programs can help Ohio youth to thrive as a part of the green workforce of the future.

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